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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/878,674	06/11/2001	Dean C. Miller	7784-000256	2024

7590 05/24/2004

Harness, Dickey & Pierce, P.L.C.
P. O. Box 828
Bloomfield Hills, MI 48303

EXAMINER	
LE, DANH C	

ART UNIT	PAPER NUMBER
2683	8

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/878,674	MILLER ET AL.	
	Examiner	Art Unit	
	DANH C LE	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-11 and 15-20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zicker (US 5,995,833) in view of Moore (US 5,450,617) and Ronald (US 5,880,867).**

As to claim 1, Zicker teaches a wireless local area network adapted for use by users traveling on a mobile platform (figure 2), the network comprising:

a network server (44) located on the mobile platform; and

a plurality of network access points (40, 52, 56) connected to the server, each access point accessible wirelessly by at least one user portable electronic device over one of a plurality of wireless channels (col.5, line 30-col.6, line 25).

Zicker fails to teach the wireless channel having non-overlapping frequency and access points independently associated with a specified cell area on the mobile platform each being connected to the server and where each of the network access points is configure to wirelessly communicate with the said portable electronic device within an associated one of a plurality of cells area on the mobile platform, and is further configured to communicate with said portable electronic device that is roaming into a second one of said portable electronic device that is roaming into a second one of said cell areas on the mobile platform from a first one of said cell areas on the mobile

platform. Moore teaches the wireless channel having non-overlapping frequency (col.5, lines 24-55). Ronald teaches access points (figure 12, 1707) independently associated with a specified cell area on the mobile platform each being connected to the server (1251) and where each of the network access points is configure to wirelessly communicate with the said portable electronic device within an associated one of a plurality of cells area on the mobile platform, and is further configured to communicate with said portable electronic device that is roaming into a second one of said portable electronic device that is roaming into a second one of said cell areas on the mobile platform from a first one of said cell areas on the mobile platform (user can roam from access point 1207 to 1211, col.17, lines 16-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Moore and Ronald into the system of Zicker in order to use the dynamic allocation which avoid the interference.

As to claim 2, Zicker teaches the wireless local area network of claim 1 wherein the network access points are spaced apart within an interior area of the platform (figure 2, 40, 52, 56).

As to claim 3, Zicker teaches the wireless local area network of claim 1 wherein at least one of the access points is configured so that a line replaceable unit of an aircraft system and an antenna of the access point are separated by a distance at which a field strength of the antenna is less than interference thresholds of the line replaceable unit (col.5, line 30-col.6, line 25).

As to claim 4, Zicker teaches the wireless local area network of claim 1 wherein arch of the network access points comprises an antenna mounted in an overhead area of the mobile platform (figure 2, 40, 52, 56).

As to claim 5, Zicker teaches the wireless local area network of claim 1 wherein each of the network access points is configured to provide a wireless link only to portable electronics devices predetermined to meet predetermined standards for at least one of interference, health and safety (col.1, lines 47-67).

As to claim 6, Zicker teaches the wireless local area network of claim 5 wherein each of the network access points is further configured to ignore any portable electronic device not pre-determined to meet the predetermined standards (col.5, line 30-col.6, line 25).

As to claim 10, Zicker teaches wireless local area network of claim 1 wherein each of the access points comprises an antenna configured to communicate over a channel not being used by an adjacent access point antenna (col.5, line 30-col.6, line 25).

As to claim 11, Zicker teaches the wireless local area network of claim 9 wherein at least one of the channels is assigned to more than one of the access points (col.5, line 30-col.6, line 25).

As to claim 15, Zicker teaches the wireless local area network of claim 1 further comprising at least one antenna system configured to transmit to and receive data from a ground-based system (figure 2, 48).

As to claim 16, the claim is a method claim of claim 1; therefore, the claim is interpreted and rejected as set forth in the claim 1.

As to claim 17, the claim is a method claim of claim 5; therefore, the claim is interpreted and rejected as set forth in the claim 5.

As to claim 18, the claim is a method claim of claim 6; therefore, the claim is interpreted and rejected as set forth in the claim 6.

As to claim 19, the claim is a method claim of claim 7; therefore, the claim is interpreted and rejected as set forth in the claim 7.

As to claim 20, the claim is a method claim of claim 10; therefore, the claim is interpreted and rejected as set forth in the claim 10.

As to claim 21, Zicker and Mooore teaches further the non-overlapping channels comprise three channels (Moore, figure 2, 202 and plurality of channels 204).

As to claim 22, Zicker teaches the method of claim 16 wherein the step of distributing use of a plurality of channels comprises assigning a channel to more than one access point (figure 11, 1167, 1187).

3. **Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zicker, Moore and Ronald in view of Wright (US 6,047,165).**

As to claim 8, Zicker, Moore and Ronald teaches the wireless local area network of claim 1 wherein each of the network access points is configured to transmit and receive signals using RF. The combination of Zicker, Moore and Ronald fails to teach access points is configured to transmit and receive signals using a spread-spectrum modulation method.

Wright teaches access points is configured to transmit and receive signals using a spread-spectrum modulation method (col.13, lines 34-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Wright into the system of Zicker, Moore and Ronald in order to resist to jamming and immunity to multi-path interference.

As to claim 9, the combine of Zicker, Moore, Ronald and Wright teaches the wireless local area network of claim 8 wherein each of the network access points is configured to transmit and receive signals using direct sequence spread spectrum transmission (Wright, col.13, lines 34-55).

4. **Claims 22, 23, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zicker (US 5,995,833) in view of Wright (US 6,047,165).**

As to claim 23, Zicker teaches a wireless local area network configured to operate at a given spectrum band and adapted for use by users traveling on an aircraft (figure 11), the network comprising:

a network server located on the mobile platform (1153); and

a plurality of network access points on the mobile platform (1165, 1161) connected to the server and configured to transmit wirelessly to at least one user portable electronic device on the mobile platform using RF.

Zicker fails to teach the connection using direct sequence spread spectrum transmission. Wright teaches the connection using direct sequence spread spectrum transmission (col.13, lines 34-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of

Wright into the system of Zicker and Moore in order to resist to jamming and immunity to multi-path interference.

As to claim 25, the combine of Zicker and Wright teaches the wireless local area network of claim 23 wherein more than one of the access points (Zicker, figure 2, 40, 52) is configured to transmit over the same channel of the network spectrum (Wright, col.13, lines 34-55).

5. **Claims 12 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zicker, Moore and Ronald in view of Rautiola (US 5,924,030).**

As to claims 12 and 24, Zicker, Moore and Ronald teaches the wireless local area network of claim 1. Zicker, Moore and Ronald fails to teach wherein each of the access points transmits at a radiated power between 1 and 5 milliwatts. Rautiola teaches the access points transmits at a radiated power less than 1 miilimeter (col.7, lines 17-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Rautiola into the system of Zicker and Moore, Ronald in order to transmit a very low power.

6. **Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zicker, Moore and Ronald in view of Wright (US 6,047,165).**

As to claim 13 and 14, Zicker, Moore and Ronald teaches the wireless local area network of claim 1. Zicker, Moore and Ronald fails to teach wherein each of the access points communicates with the portable electronic devices at frequencies at and above about 2.40 GHz and between 2.40 and 2.483 GHz. Wright teaches each of the access

points communicates with the portable electronic devices at frequencies at and above about 2.40 GHz (col.14, lines 32-40). The combination of Zicker, Moore and Ronald and Wright fails to teach the frequencies is between 2.40 GHz-2.483 GHz, however, the engineer can design each of the access points communicates with the portable electronic devices at the frequencies between 2.40 GHz-2.483 GHz. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Wright and the frequencies between 2.40 GHz-2.483 GHz and into the system of Zicker, Moore and Ronald in order to support a variety of different frequencies.

Response to Arguments

7. Applicant's arguments with respect to claims 1-6, 8-22 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments on claims 22-25 have been fully considered but they are not persuasive.

On page 11, line 7 of the Applicant's remark, the applicant argues that Wright did not disclose "direct sequence spectrum transmission".

In response, the examiner did not agree, the examiner believe that Wright teaches "direct sequence spectrum transmission" on col.13, lines 44-49 and col.14, lines 41053.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C LE whose telephone number is 703-306-0542. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Danh C.Le

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600